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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|---|---|---|---|
| 09/596,195 | 06/17/2000 | JASON R. WILCOX | 1018.084US1 | 1771 |

27792 7590 07/30/2004

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|---|---|
| DURAN, ARTHUR D | |
| **ART UNIT** | **PAPER NUMBER** |
| 3622 | |

DATE MAILED: 07/30/2004

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**BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

Paper No. 7/21/04

Application Number: 09/596,195
Filing Date: June 17, 2000
Appellant(s): Wilcox, Jason et al.



Ronald M. Anderson
For Appellant

## EXAMINER'S ANSWER

This is in response to the appeal brief filed 6/28/04.

***(1) Real Party in Interest***

A statement identifying the real party in interest is contained in the brief.

***(2) Related Appeals and Interferences***

A statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief.

***(3) Status of Claims***

The statement of the status of the claims contained in the brief is correct.

***(4) Status of Amendments After Final***

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

***(5) Summary of Invention***

The summary of invention contained in the brief is correct.

***(6) Issues***

The appellant's statement of the issues in the brief is correct.

*(7) Grouping of Claims*

The appellant's statement that the claims of Group I, Group II, Group III, and Group IV stand or fall together in Group I or in Group II or in Group III or in Group IV, respectively, is correct.

*(8) Claims Appealed*

The copy of the appealed claims contained in the Appendix to the brief is correct.

*(9) Prior Art of Record*

The following is a listing of the prior art of record relied upon in the rejection of claims under appeal.

| | | |
|---|---|---|
| 6,026,368 | BROWN | 2-2000 |
| 6,029,195 | HERZ | 2-2000 |
| 6,434,745 | CONLEY | 8-2002 |

*(10) Grounds of Rejection*

The following ground(s) of rejection are applicable to the appealed claims:

Claims 8, 13, and 18-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brown (6,026,368) in view of Herz (6,029,195).

Claims 8, 13, and 18-21: Brown discloses a method for providing content and advertising information to a targeted set of viewers. Brown further discloses that content locations (websites) and site hosts can be targeted for the content (col 3, lines 45-62 and col 23, lines 18-26). Brown further discloses constructing sub item slot groups, each sub group having item slots, each item slot initially unfilled and able to be filled by an item (col 9, lines 15-52),

constructing item slot groups, each group having at least one sub item slot group and having item slots equal to a total number of item slots of the at least one sub item slot group the group encompasses, each item slot initially unfilled and able to be filled by an item (col 9, lines 15-52), constructing meta item slot groups, each meta group having at least one item slot group and having item slots equal to a total number of item slots of the at least one item slot group the meta group encompasses, each item slot initially unfilled and able to be filled by an item (col 9, lines 15-52), allocating items of a first type over the item slots of the meta item slot groups that are unfilled by matching characteristics of the item to characteristics of the meta item slot group, such that allocating an item to an item slot fills the item slot with the item (col 10, lines 24-40), allocating items of a second type over the item slots of the meta item slot groups that are unfilled, the item slots of the item slot groups that are unfilled, and the item slots of the sub item slot groups that are unfilled, by matching characteristics of the items to characteristics of the sub item slot groups, such that allocating an item to an item slot fills the item slot with the item (col 10, lines 24-40), and allocating items of the first type over the item slots of the item slot groups that are unfilled and the item slots of the sub item slot groups that are unfilled, such that allocating an item to an item slot fills the item slot with the item (col 10, lines 24-40).

Brown further discloses that different and simultaneous queues are created for different types or categories, that these queues are formed based on rules and priorities, and also that these queues can be combined to form one main queue (col 17, lines 30-55; col 5, lines 40-49; col 3, line 62-col 4, line 15). Brown discloses that play lists can be constructed according to predetermined rules and definitions (col 2, lines 1-5; col 2, lines 15-28). Brown further discloses that sets of priority queues are generated (col 5, lines 56-60). The Merriam-Webster Online

Dictionary (www.m-w.com) states that a set is, " 2 : a number of things of the same kind that belong or are used together." Hence, it is inherent to a set that a set has a limited number of items.

Brown further discloses that a specific number of segments is predetermined and then returned in response to the reception of a playlist (col 17, lines 24-29).

Brown further discloses that the analyst creates and controls all aspects of what and how target objects will be targeted (col 13, lines 19-26) and that a variety of content segments are available to select to fill these target objects (col 13, lines 19-26).

Brown further discloses that there are folders for the different types of target entities and also folders of the available items to fill those target entities (col 13, line 65-col 14, line 12). Brown further discloses that content items can be selected to fill empty content slots (col 14, lines 9-12).

Brown further discloses that target object slots are filled and that content segment fields are filled, and that target object slots are matched with content segments (col 14, lines 13-15). Brown further states, 'When the target object and content segment fields are filled,'(col 14, lines 13-15, therefore, it is obvious to Brown's disclosure that there is a limit on the target object slots and content segment fields that need to be filled. It is, therefore, obvious to Brown's disclosure that items are added to unfilled slots, that there are a predetermined number of slots, that these slots are originally empty, and that these slots need to be filled.

Brown further discloses that available records can be added to folders based on the type of information that that folder holds (col 9, lines 34-46; col 10, lines 31-40).

Brown further discloses that different content segments can be targeted with different priorities (col 13, lines 28-36; col 3, lines 55-62).

Brown does not explicitly disclose that the folders, priority queues, and records are placed in hierarchical or ranked order where a higher folder or queue is more encompassing, broader or more general in scope than a lower folder or queue.

However, Herz discloses created ranked ordered lists of items of interest to a users (col 1, lines 25-25); creating collections, subcollections, clusters, and categories of items of gradually more focused content (col 3, lines 30-54); of targeting and matching content to the slots and hierarchical categories (col 5, lines 20-52); that groups are organized into general to gradually more specific groups, where each group has several categories within it (col 8, lines 5-21; Fig. 7); that different attributes can be determined and given different priorities for different categories (col 16, line 60-col 17, line 57); hierarchical clusters whereby an item is a member of all the clusters above it and each cluster beneath an item becomes more and more specific in scope (col 25, lines 10-67); routing information to particular categories in a prioritized way (col 35, lines 55-65); that content can be prioritized and matched (col 36, line 60-col 37, line 20); grouping targeted content into hierarchical clusters (col 16, lines 15-31); filling empty item slots for advertising (col 73, lines 28-34); that empty sets can be created and then filled (col 26, lines 21-24; col 50, lines 38-43); that the matching can be performed for advertising purposes (col 7, lines 29-51).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to add Herz's hierarchical clustering to Brown's advertisement and advertisement slot matching. One would have been motivated to do this because Herz's

hierarchicial clustering allows Brown to organize his folders, sub-folders, categories, and priority queues in a manner that can better match items of different priorities.

Brown further discloses building queues according to predetermined rules (col 2, lines 1-5), filling content segment slots (col 14, lines 9-15), several different queues (col 14, lines 24-30), and that the queues are of different sizes (col 14, lines 29-36), and that queues can be empty (col 14, lines 34-36). Note that the queues can be different sizes because the queues are filled with the however many valid rules there are for that type.

Brown further discloses receiving priotity queues and then sending content segment play lists for those queues (col 1, lines 47-52; col 2, lines 14-28). Note that the priority queue is synonymous with an predetermined number of empty slots that need to be filled. Brown then returns a play list that has content filling the queue that was received. Therefore, Brown receives a prioritized list of slots that need to be filled. Brown returns content filling those slots. The empty queues that need to be filled can be of different sizes because several queues are received. The play lists that are returned fill those previously empty lists of slots.

Brown further discloses receiving different queues for different targets types, that these queues can each be defined with different rules, and that a play list filling each previously empty queue is returned (col 3, line 62-col 4, line 7).

Brown further discloses returning play lists of different number of content segments and the number of content segments to be returned is predefined (col 16, lines 63-68; col 17, lines 23-28). Therefore, the queue is received with a predetermined number of empty slots that need to be filled. The play lists is returned with a specific number of content segments that fill the previously empty slots.

Brown further discloses that the priority queues can be determined and defined by different criteria (col 27, lines 40-45).

Additionally, Herz discloses a list of target objects and an empty tree of target objects that need to be filled (Fig. 13a; Fig. 13b).

Herz further discloses hierarchical clustering where clusters and subclusters can be formed with common traits in each cluster and more specificity as clusters move down the tree of attributes with further specification (Fig. 7; col 25, lines 10-23). Herz further discloses iterations of organizing of target objects into further specification (col 25, lines 30-40). Herz further discloses finding target objects to fit target profiles (col 26, lines 1-20).

Brown further discloses that a slot can be filled by either an item of a first type having a corresponding characteristic or an item of a second type having a corresponding characteristic (col 17, lines 37-42), wherein each item slot is only filled by one item (col 17, lines 37-42).

Brown further discloses a priority play list (col 17, lines 39-43) with a predetermined number of empty slots (col 17, lines 23-29). Brown further discloses that each slots is filled only once (col 17, lines 53-55) and that an item of either a first or second type can fill the slot (col 17, lines 37-43; col 17, lines 40-46; col 17, lines 50-56). Note that there are different results lists for different types and that these different types are selected from in order to fill each slot in the priority play list.

Claims 1-7, 9-12, and 14-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brown (6,026,368) in view of Herz (6,029,195) in further view of Conley (6,434,745).

Claim 1: Brown discloses a method for providing content and advertising information to a targeted set of viewers. Brown further discloses that content locations (websites) and site hosts can be targeted for the content (col 3, lines 45-62 and col 23, lines 18-26). Brown further discloses constructing item slot groups, each group having item slots, each item slot initially unfilled and able to be filled by an item (col 9, lines 15-52), allocating items of a first type to the item slots of the item slot groups that are unfilled by matching characteristics of the first type of items to characteristics of the item slot group, such that allocating an item to an item slot fills the item slot with the item (col 10, lines 24-40), allocating items of a second type over the item slots of the item slot groups that are unfilled, by matching characteristics of the second type of items to characteristics of the item slot groups, such that allocating an item to an item slot fills the item slot with the item (col 10, lines 24-40). Brown further discloses displaying the items that are available for a group (col 10, lines 35-40).

Brown further discloses that different and simultaneous queues are created for different types or categories, that these queues are formed based on rules and priorities, and also that these queues can be combined to form one main queue (col 17, lines 30-55; col 5, lines 40-49; col 3, line 62-col 4, line 15). Brown discloses that play lists can be constructed according to predetermined rules and definitions (col 2, lines 1-5; col 2, lines 15-28). Brown further discloses that sets of priority queues are generated (col 5, lines 56-60). The Merriam-Webster Online Dictionary (www.m-w.com) states that a set is, " 2 : a number of things of the same kind that belong or are used together." Hence, it is inherent to a set that a set has a limited number of items.

Brown further discloses that a specific number of segments is predetermined and then returned in response to the reception of a playlist (col 17, lines 24-29).

Brown further discloses that the analyst creates and controls all aspects of what and how target objects will be targeted (col 13, lines 19-26) and that a variety of content segments are available to select to fill these target objects (col 13, lines 19-26).

Brown further discloses that there are folders for the different types of target entities and also folders of the available items to fill those target entities (col 13, line 65-col 14, line 12). Brown further discloses that content items can be selected to fill empty content slots (col 14, lines 9-12).

Brown further discloses that target object slots are filled and that content segment fields are filled, and that target object slots are matched with content segments (col 14, lines 13-15). Brown further states, 'When the target object and content segment fields are filled,'(col 14, lines 13-15, therefore, it is obvious to Brown's disclosure that there is a limit on the target object slots and content segment fields that need to be filled. It is, therefore, obvious to Brown's disclosure that items are added to unfilled slots, that there are a predetermined number of slots, that these slots are originally empty, and that these slots need to be filled.

Brown further discloses that available records can be added to folders based on the type of information that that folder holds (col 9, lines 34-46; col 10, lines 31-40).

Brown further discloses a predefined number of item slots (col 17, lines 24-29; col 14, lines 13-15).

Brown further discloses that different content segments can be targeted with different priorities (col 13, lines 28-36; col 3, lines 55-62).

Brown does not explicitly disclose that the folders, priority queues, and records are placed in hierarchical or ranked order where a higher folder or queue is more encompassing, broader or more general in scope than a lower folder or queue.

However, Herz discloses created ranked ordered lists of items of interest to a users (col 1, lines 25-25); creating collections, subcollections, clusters, and categories of items of gradually more focused content (col 3, lines 30-54); of targeting and matching content to the slots and hierarchical categories (col 5, lines 20-52); that groups are organized into general to gradually more specific groups, where each group has several categories within it (col 8, lines 5-21; Fig. 7); that different attributes can be determined and given different priorities for different categories (col 16, line 60-col 17, line 57); hierarchical clusters whereby an item is a member of all the clusters above it and each cluster beneath an item becomes more and more specific in scope (col 25, lines 10-67); routing information to particular categories in a prioritized way (col 35, lines 55-65); that content can be prioritized and matched (col 36, line 60-col 37, line 20); grouping targeted content into hierarchical clusters (col 16, lines 15-31); filling empty item slots for advertising (col 73, lines 28-34); that empty sets can be created and then filled (col 26, lines 21-24; col 50, lines 38-43); that the matching can be performed for advertising purposes (col 7, lines 29-51).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to add Herz's hierarchical clustering to Brown's advertisement and advertisement slot matching. One would have been motivated to do this because Herz's hierarchicial clustering allows Brown to organize his folders, sub-folders, categories, and priority queues in a manner that can better match items of different priorities.

Brown does not explicitly state that the information is displayed in bar graph format.

However, Conley discloses advertising over the Internet, utilizing advertising categories and sub-categories, and reporting on advertising information (col 1, lines 30-57). Conley further discloses utilizing graphs, charts, and histograms for data reporting (col 9, lines 32-36).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to add Conley's complex graphical displays and histograms of data information to Brown's advertisement management method. One would have been motivated to do this because Brown discloses displaying the items available and Conley's complex graphical displays and histograms of data information is an obvious way of doing this that lends itself to easy interpretation of whether folders or queues are filled or not.

Brown further discloses building queues according to predetermined rules (col 2, lines 1-5), filling content segment slots (col 14, lines 9-15), several different queues (col 14, lines 24-30), and that the queues are of different sizes (col 14, lines 29-36), and that queues can be empty (col 14, lines 34-36). Note that the queues can be different sizes because the queues are filled with the however many valid rules there are for that type.

Brown further discloses receiving priotity queues and then sending content segment play lists for those queues (col 1, lines 47-52; col 2, lines 14-28). Note that the priority queue is synonymous with a predetermined number of empty slots that need to be filled. Brown then returns a play list that has content filling the queue that was received. Therefore, Brown receives a prioritized list of slots that need to be filled. Brown returns content filling those slots. The empty queues that need to be filled can be of different sizes because several queues are received. The play lists that are returned fill those previously empty lists of slots.

Brown further discloses receiving different queues for different targets types, that these queues can each be defined with different rules, and that a play list filling each previously empty queue is returned (col 3, line 62-col 4, line 7).

Brown further discloses returning play lists of different number of content segments and the number of content segments to be returned is predefined (col 16, lines 63-68; col 17, lines 23-28). Therefore, the queue is received with a predetermined number of empty slots that need to be filled. The play lists is returned with a specific number of content segments that fill the previously empty slots.

Brown further discloses that the priority queues can be determined and defined by different criteria (col 27, lines 40-45).

Additionally, Herz discloses a list of target objects and an empty tree of target objects that need to be filled (Fig. 13a; Fig. 13b).

Herz further discloses hierarchical clustering where clusters and subclusters can be formed with common traits in each cluster and more specificity as clusters move down the tree of attributes with further specification (Fig. 7; col 25, lines 10-23). Herz further discloses iterations of organizing of target objects into further specification (col 25, lines 30-40). Herz further discloses finding target objects to fit target profiles (col 26, lines 1-20).

Brown further discloses that a slot can be filled by either an item of a first type having a corresponding characteristic or an item of a second type having a corresponding characteristic (col 17, lines 37-42), wherein each item slot is only filled by one item (col 17, lines 37-42).

Brown further discloses a priority play list (col 17, lines 39-43) with a predetermined number of empty slots (col 17, lines 23-29). Brown further discloses that each slots is filled only

once (col 17, lines 53-55) and that an item of either a first or second type can fill the slot (col 17, lines 37-43; col 17, lines 40-46; col 17, lines 50-56). Note that there are different results lists for different types and that these different types are selected from in order to fill each slot in the priority play list.

Furthermore, once Brown is understood to disclose queues of different sizes with different amount of empty slots, it is obvious that Conley's histograms can graphically represent the situation of Brown's queues. For example, if Brown discloses a Queue 1 with 5 total slots, 3 filled, a Queue 2 with 7 total slots, 1 filled, and a Queue 3 with 9 total slots, 6 filled, then Conley's histograms would graphically display that situation through bars of different heights where the bars are filled in to different levels. It is obvious to one skilled in the art that histograms can display bars of different heights with appropriate shading within the bar to represent a situation. Therefore, if Brown discloses such a situation, then histograms can represent it.

Claims 2, 10, and 15: Brown, Herz, and Conley disclose a method as in claims 1, 8, and 13. Brown further discloses that each item comprises an ad and each item slot group comprises a web site, such that each item slot corresponds to an advertising space (col 4, lines 7-10; col 23, lines 18-24; col 17, lines 21-24).

Claims 3, 11, and 16: Brown, Herz, and Conley disclose a method as in claims 2, 10, and 15. Brown further discloses that the first type of items comprises member ads, and the second type comprises sponsor ads (col 5, lines 63-67).

Claims 4, 12, and 17: Brown, Herz, and Conley disclose a method as in claims 1, 8, and 13. Brown further discloses a fill quota and filling the slots with a number of items equal to the quota (col 25, line 63-col 26, line 19 and col 9, lines 15-52).

Claim 5: Brown, Herz, and Conley disclose a method as in claim 4. Brown further discloses filling the items of the first type with the number of item slots of the item slot groups that are unfilled with the item equal to the quota proportionally as to the item slots unfilled of the item slot groups having characteristics matching the characteristics of the item (col 25, line 63-col 26, line 19; col 9, lines 15-52; and col 10, lines 24-40).

Claim 6: Brown, Herz, and Conley disclose a method as in claim 1. Brown further discloses that the second type has a quota, wherein allocating each of the items of the second type comprises filling the items of the slot groups that are unfilled with the items equal to the quota (col 25, line 63-col 26, line 19; col 9, lines 15-52; and col 10, lines 24-40).

Claim 7: Brown, Herz, and Conley disclose a method as in claim 6. Brown further discloses filling the items of the second type with the number of item slots of the item slot groups that are unfilled with the item equal to the quota proportionally as to the item slots unfilled of the item slot groups having characteristics matching the characteristics of the item (col 25, line 63-col 26, line 19; col 9, lines 15-52; and col 10, lines 24-40).

Claims 9 and 14: Brown and Herz disclose a method as in claims 8 and 13.

Brown further discloses displaying the items that are available for a group (col 10, lines 35-40).

Brown does not explicitly state that the information is displayed in bar graph format.

However, Conley discloses advertising over the Internet, utilizing advertising categories and sub-categories, and reporting on advertising information (col 1, lines 30-57). Conley further discloses utilizing graphs, charts, and histograms for data reporting (col 9, lines 32-36).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to add Conley's complex graphical displays and histograms of data information to Brown's advertisement management method. One would have been motivated to do this because Brown discloses displaying the items available and Conley's complex graphical displays and histograms of data information is an obvious way of doing this that lends itself to easy interpretation of whether folders or queues are filled or not.

***(11) Response to Argument***

In Appellant's Arguments beginning on page 10 of the Appeal Brief concerning Group I, claims 8, 13, 20, Appellant states, "the suggested combination of Herz and Brown is not equivalent to the Appellant's claimed invention, because the item slot groups (and meta item slot groups) recited in Claims 8, 13, 20 are not equivalent to either the play lists or priority queues disclosed by Brown, and because the hierarchical clustering disclosed by Herz is not equivalent to the organizational technique recited in appellant's claims. Second, a combination of Herz and Brown would be computationally inefficient and yield no obvious benefit or solve any problem recognized in the cited art. . .there would be no motivations for one of ordinary skill in the art to make the combination..."

In Appellant's Arguments beginning on page 18 of the Appeal Brief concerning Group II, claims 18, 19, Appellant states "Claims 18 and 19 are distinguishable over the cited art for at least four reasons. First, Claims 18 and 19 define organizational structures (item slot groups and meta item slot groups) wherein the total number of item slots in each organizational structure is equal, whereas this is not true with respect to the organizational structures disclosed in the cited art. Second, Claims 18 and 19 define filling item slot groups in a manner that clearly differs from the technique disclosed by Brown to 511 play lists, even if Brown's play lists were further organized in accord with the hierarchical clustering disclosed by Herz. Third, Brown's bifurcation of computationally intensive off-line activities and computationally efficient on-line/real-time activities teaches away from the suggested combination of Brown and Herz, which would result in computationally intensive activities both off-line and on-line. Finally, Claims 18

and 19 recite that the empty item slots have characteristics, such that empty item slots can be organized into groups according to those characteristics. The first, second and third reasons have already been discussed above in regards to the rejection of Claims 8, 13, and 20 over the same art."

In Appellant's Arguments beginning on page 19 of the Appeal Brief concerning Group III, claim 21, Appellant states, "Each of these distinguishing characteristics have been discussed above in detail with respect to the rejection of claims 8, 13, 20."

In Appellant's Arguments beginning on page 20 of the Appeal Brief concerning Group IV, claims 1-7, 9-12, and 14-17, Appellant presents arguments equivalent to the arguments presented in reference to prior claim groups.

In the Conclusion section beginning on page 21 of the Appellant's Arguments in the Appeal Brief, the Appellant presents the following arguments concerning claims 8, 13, and 18-21, "Specifically, the cited art fails to teach steps that are equivalent to appellants' recited steps for constructing item slot groups and meta item slot groups. The cited art also fails to teach filling more specifically defined organizational structures (item slot groups) with elements that share only a broad characteristic in common (a meta characteristic). Also, the hierarchical clusters disclosed by Herz do not allow for items sharing only a broad characteristic in the lower, more specifically defined clusters. Brown's bifurcation of computationally intensive off-line activities and computationally efficient on-line/real-time activities teaches away from the suggested combination of Brown and Herz, which as discussed above would result in computationally intensive activities both off-line and on-line. Further, the combination suggested by the Examiner would logically result in a less computationally efficient process,

which appears to provide no additional benefit to compensate for the loss in efficiency, and thus, a person of ordinary skill in the art would not be motivated to make this combination."

In the Conclusion section beginning on page 21 of the Appellant's Arguments in the Appeal Brief, the Appellant presents the following arguments concerning claims 1-7, 9-12, and 14-17, "Specifically, the cited art fails to teach steps that are equivalent to appellants' recited steps for constructing item slot groups after determining a number of empty slots in an inventory, such that item slot groups are constructed based on characteristics of the empty slots. Further, the combination suggested by the Examiner would logically result in a less computationally efficient process, which appears to provide no additional benefit to compensate for the loss in efficiency."

However, the combination of Brown and Herz disclose the features of the Appellant's claimed invention.

Brown discloses building queues according to predetermined rules (col 2, lines 1-5), filling content segment slots (col 14, lines 9-15), several different queues (col 14, lines 24-30), and that the queues are of different sizes (col 14, lines 29-36), and that queues can be empty (col 14, lines 34-36). Note that the queues can be different sizes because the queues are filled with the however many valid rules there are for that type.

Brown further discloses receiving priority queues and then sending content segment play lists for those queues (col 1, lines 47-52; col 2, lines 14-28). Note that the priority queue is synonymous with an predetermined number of empty slots that need to be filled. Brown then returns a play list that has content filling the queue that was received. Therefore, Brown receives a prioritized list of slots that need to be filled. Brown returns content filling those slots. The

empty queues that need to be filled can be of different sizes because several queues are received. The play lists that are returned fill those previously empty lists of slots.

Brown further discloses receiving different queues for different targets types, that these queues can each be defined with different rules, and that a play list filling each previously empty queue is returned (col 3, line 62-col 4, line 7).

Brown further discloses returning play lists of different number of content segments and the number of content segments to be returned is predefined (col 16, lines 63-68; col 17, lines 23-28). Therefore, the queue is received with a predetermined number of empty slots that need to be filled. The play lists is returned with a specific number of content segments that fill the previously empty slots.

Brown further discloses that the priority queues can be determined and defined by different criteria (col 27, lines 40-45).

Additionally, Herz discloses a list of target objects and an empty tree of target objects that need to be filled (Fig. 13a; Fig. 13b).

Herz further discloses hierarchical clustering where clusters and subclusters can be formed with common traits in each cluster and more specificity as clusters move down the tree of attributes with further specification (Fig. 7; col 25, lines 10-23). Herz further discloses iterations of organizing of target objects into further specification (col 25, lines 30-40). Herz further discloses finding target objects to fit target profiles (col 26, lines 1-20).

Brown further discloses that a slot can be filled by either an item of a first type having a corresponding characteristic or an item of a second type having a corresponding characteristic (col 17, lines 37-42), wherein each item slot is only filled by one item (col 17, lines 37-42).

Brown further discloses a priority play list (col 17, lines 39-43) with a predetermined number of empty slots (col 17, lines 23-29). Brown further discloses that each slots is filled only once (col 17, lines 53-55) and that an item of either a first or second type can fill the slot (col 17, lines 37-43; col 17, lines 40-46; col 17, lines 50-56). Note that there are different results lists for different types and that these different types are selected from in order to fill each slot in the priority play list.

Additionally, in reference to the rejections of any of the claims and any of the groupings of claims, the Appellant has presented arguments concerning the combination of Brown and Herz. Appellant has stated on page 18 of the Appeal Brief, "Brown's bifurcation of computationally intensive off-line activities and computationally efficient on-line/real-time activities teaches away from the suggested combination of Brown and Herz, which would result in computationally intensive activities both off-line and on-line."

However, the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981).

Additionally, Brown and Herz were not combined for the reasons of computational efficiency. Rather, the Examiner stated in the most recent Final Rejection that, "It would have been obvious to one having ordinary skill in the art at the time the invention was made to add Herz's hierarchical clustering to Brown's advertisement and advertisement slot matching. One would have been motivated to do this because Herz's hierarchicial clustering allows Brown to

organize his folders, sub-folders, categories, and priority queues in a manner that can better match items of different priorities."

Additionally, because both Brown (title) and Herz (col 7, lines 35-40) are oriented to targeted advertising, the general objectives of both inventions are similar. Herz was combined with Brown because Herz provides more organizational capabilities for the multitude of items, lists, folders, queues, and categories that Brown organizes.

Also, in further response to the computational efficiency of Brown in light of Herz, while Brown discloses that the content is organized after the target object is defined or filled (col 14, lines 13-22), the architecure disclosed by Brown allows organizing of content before or after the inventory size is determined (Fig. 10; Fig. 11). Hence, the archictecture disclosed by Brown is flexible as to where computations are performed and Herz was combined with Brown because Herz offers more organizational capabilities that would be obvious to one skilled in the art as useful to Brown.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

July 21, 2004

Conferees:

Eric Stamber

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